**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ P: \_\_\_\_**

CWHW95: Solve Quadratic Eq’n by Factoring & Determine Quadratic Eq’n Given Solution Set

Honors Geometry

**Factoring Review!**

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| **Example 1:** | **Example 2:** | **Example 3:** |
| 1) | 2) | 3) |

**Review from last week:**

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| 1) Find the solutions by graphing: | 2) Now, factor .  If you set each binomial equal to zero, what values of x make the equation true? |
| 3) What do you notice about the solutions you found from graphing  and factoring ? What does this tell you about solving quadratic equations? | |

**\*\*Copy the following notes into your notebook:   
Solve quadratic equations by factoring!** Your equation must be set equal to \_\_\_\_\_\_\_\_ ! The values are called the “\_\_\_\_\_\_\_\_\_” or “\_\_\_\_\_\_\_\_\_” of a function, and are the solutions to the function.

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| **Example 1:** Determine the zeros of the function using factoring:  a) | b) x² - 2x = 15  c) |
| **Example 2:** The expressions  and  are equivalent when x is equal to what value(s)? | 1) The expressions  and  are equivalent when b is equal to what value(s)? |
| 2) What are the solutions of 4x² = x?   1. -4 and 0 2. -0.25 and 0 3. 0 and 0.25 4. 0 and 4 | 3) What are the solutions to the quadratic equation |
| 4) What are the roots of the equation? | 5) What is the ***sum*** of the solutions to the equation? |
| 6) Solve the following equation:  a.  b. | 7) Find the zeros of the functions.  a.  b. |
| 8) What are the solutions to the quadratic equation | 9) What are the solutions to the quadratic equation |

**Determining the Quadratic Equation when Given the Solution Set**

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| **Example 1:** What is the quadratic equation that has a solution set of {–2, –3}? | **Example 2:** The solution set x = {2, 5} could be the solution set for which of the following quadratic equations?   1. x2 + 3x – 10 = 0 2. x2 – 7x – 10 = 0 3. x2 – 7x + 10 = 0 4. x2 + 7x + 10 = 0 5. x2 – 3x + 10 = 0 |

**Practice Problems**

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| 1. x = {4, 5} is the solution set to what quadratic equation? | 2. Name the quadratic that has {–1, 4} as its solution set. | 3. Which equation has x = ­–4 and x = 6 as its two solutions? |
| 4. What is the quadratic equation with the solution set {4, –12)? | 5. Which equation does NOT have  as a solution? | 6. x = 2 and x = 4 are solution for what quadratic equation? |
| 4.  is the solution set for which of the following quadratic equations?  a.  b.  c.  d.  e. | 5. Which of the following quadratic equations has the solution set {–7, 4}?   1. x2 – 3x – 28 = 0 2. x2 – 3x + 28 = 0 3. x2 + 3x + 28 = 0 4. x2 + 7x – 28 = 0 5. None of the above | 6. x = {3, 9} is a solution set to which of the following quadratic equations?   1. x2 – 12x + 27 = 0 2. x2 + 12x –27 = 0 3. x2 + 12x + 27 = 0 4. x2 – 12x – 27 = 0 5. None of the above |